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EXAMINER	
SMITH, RICHARD A	
ART UNIT	**PAPER NUMBER**
2859	

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/807,001	RIBI ET AL.	
	Examiner	Art Unit	
	R. Alexander Smith	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 3-7, 9, 20-24, 26 and 36-43 are objected to because of the following informalities:

For each of claims 3, 20 and 36, should not "silicon" be --silicone--?

For each of claims 9, 26 and 43, it appears to the examiner that "hexacosnaol" is misspelled.

Claim 37 is objected to since it is a duplicate of claim 25.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 18 are finally rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 5,144,880 to Schmit.

Schmit teaches a thermal indicator having a body having an orifice (18 with frangible cover 33), an indicating means, a barrel with a cavity, a sliding indicator in the barrel cavity and means for resiliently biasing the indicator away from the retracted position and toward the extended position, and discloses that the thermal indicator is designed to incorporate a

thermopolymeric switching medium contained within the body such as a suitable hot melt adhesive or other thermoplastic adhesives (column 2, lines 62-68).

The Applicant should note that the preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

With respect to the intended use of the apparatus, i.e., "indicated the food is in an uncooked state" and "indicating that the food is in a cooked state" in claim 18: this intended use has not been given any patentable weight since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 14-17, 19 and 31-34 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Schmit in view of U.S. 5,109,054 to Smith.

Schmit teaches all that is claimed as discussed in the above rejections of claims 1 and 18 except for the limitations of claims 2, 14-17, 19 and 31-34.

Smith discloses a hot melt adhesive employing an organic thermopolymeric material (polymer fatty acid polyamide resin) and comprising at least one emulsifier selected from the group consisting of lipids, long chain alcohols, lecithins, glycol lipids, quaternized amines with lipid tails, and charged ionic detergents, and combinations thereof (abstract and column 10, lines 1-10) that can vary from 0.5% to 10%.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the hot melt adhesive, as taught by Smith, to the thermal indicator, taught by Schmit, in order to allow the thermal indicator to work as intended and described by Schmit.

With respect to the at least one emulsifier and the amount thereof by weight with respect to the switching medium, i.e., 0.001-10 %, 0.01-5 % and 0.1-1 %: Smith discloses that the type of emulsifier and amount may vary and discloses a range of 0.5% to 10%. Therefore, the limitations regarding the percentages by weight of the emulsifier as claimed is only considered to be the "optimum" values of the emulsifier amount of the thermal indicator having the hot melt adhesive, disclosed by Schmit as modified by Smith, as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based,

among other things, on providing the proper dispersion of the components in the mixture to assure the batch has uniform properties throughout. See In re Boesch, 205 USPQ 215 (CCPA 1980).

6. Claims 2-13, 19-30 and 35-37 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Schmit in view of U.S. 6,239,250 to Hefner et al.

Schmit teaches all that is claimed as discussed in the above rejections of claims 1 and 18 except for the medium being organic and the specific composition limitations of claims 3-13, 20-30, 36 and 37.

Hefner et al. discloses a hot melt adhesive employing organic polymeric materials adjustable for melting temperatures in the range of 50°C to 165°C (column3, lines 47-58) and that includes various interactive and other additives designed to be tackifiers, oils, plasticizers, waxes, fillers and the like (column 6, lines 17-57) in order to achieve the desired characteristic (the performance characteristics being in column 6, lines 58-67) and other interactive additives such as thermal stabilizers, UV stabilizers and antioxidants (column 7, lines 1-8). Hefner et al. also discloses in the claims various additives including adhesion promoters, coupling agents, other typical hot melt adhesive polymers, and the use of non-hot melt polymers.

Hefner et al. discloses that the at least one inert additive (column 6, lines 45-57) is selected from the groups as claimed, i.e., in this case chalk, glass, sand, and/or high boiling liquid polymeric material in order to improve creep, lower cost or change viscosity.

Hefner et al. discloses the at least one interactive additive (column 6, lines 17-35) is selected from the group as claimed, i.e., in this case, bees wax, petroleum distillation analogs, synthetic organic analogs, alcohols, esters, etc. in order to affect one or more of the characteristics as listed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the hot melt adhesive, as taught by Hefner et al., to the thermal indicator, taught by Schmit, in order to allow the thermal indicator to work as intended and described by Schmit.

With respect to the at least one inert additive and the amount thereof by weight with respect to the switching medium, i.e., 0.1-99 %, 5-95 % and 10-90 %, and the at least one interactive additive and the amount thereof by weight with respect to switching medium, i.e., 0.1-99 %, 5-95 %, 10-90 % and 20-80 %: Hefner et al. discloses that additives are added; that the switching medium has formulated versions that are employed for optimum performance (column 6, lines 17-20); that a multitude of bonding applications (column 6, lines 58-67) can be accommodated; and that other additives are included which affect internal characteristics of the switching medium (column 7, lines 1-7), e.g. aroma, shelf life, usage life, water resistance, etc. Therefore, the limitations regarding the percentages by weight of the inert additive and of the interactive additive are only considered to be the "optimum" values of the inert additives and the interactive additives of the thermal indicator having the hot melt adhesive, disclosed by Schmit as modified by Hefner et al, as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on provided the optimum performance characteristics for the intended use, e.g. plastic/paper

bonding, while lower creep, costs or modify viscosity, as already suggested by Hefner et al. See In re Boesch, 205 USPQ 215 (CCPA 1980).

With respect to claim 35: The Applicant should note that the preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

With respect to the intended use of the apparatus in claim 35, i.e., "indicated the food is in an uncooked state" and "indicating that the food is in a cooked state": this intended use has not been given any patentable weight since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

7. Claims 14-17, 31-34 and 38-43 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Schmit and Hefner et al. as applied to claims 2-13, 19-30 and 35-37 above, and further in view of U.S. 4,871,811 to Gaku et al.

Schmit and Hefner et al. disclose all that is claimed as discussed in the above rejections of claims 2-13, 19-30 and 35-37. Furthermore, Hefner et al. discloses that the polymerization process involves a reaction solvent and that it must serve to dissolve and keep the catalyst in

solution during the polymerization reaction and discloses a list of preferred solvents which include organic solvents including hydrocarbons such as toluene. Hefner et al. discloses that nonsolvents such as water can be contemplated (the paragraph at column 4, line 50 to column 5); that crystallinity must be controlled in the polymerization process (column 4, lines12-25); and that a continuous stirring tank is used for the preparation.

Gaku et al. discloses a hot melt adhesive composition employing thermopolymeric plastics in combination with other additives and discloses in a method that mixing is done with organic solvents including toulene to dissolve the components that this represents a relatively emulsified condition (column 5, lines 35-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include an emulsifier as claimed (in this case a lipid or alcohol) in order to assure that the composition in the mixer is emulsified and is homogeneous so as to provide a product which has uniform properties throughout the batch.

With respect to the at least one emulsifier and the amount thereof by weight with respect to the switching medium, i.e., 0.001-10 %, 0.01-5 % and 0.1-1 %: Hefner et al. discloses that additives are added; that the switching medium has formulated versions that are employed for optimum performance (column 6, lines 17-20); that a multitude of bonding applications (column 6, lines 58-67) can be accommodated; and that other additives are included which affect internal characteristics of the switching medium (column 7, lines 1-7), e.g. aroma, shelf life, usage life, water resistance, etc. Therefore, the limitations regarding the percentages by weight of the emulsifier is only considered to be the "optimum" values of the emulsifier amount of the thermal indicator having the hot melt adhesive, disclosed by Schmit as modified by Hefner et al. and

Gaku et al., as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on providing the proper dispersion of the components in the mixture to assure the batch has uniform properties throughout. See In re Boesch, 205 USPQ 215 (CCPA 1980).

8. Claims 14-17, 31-34 and 38-43 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Schmit and Hefner et al. as applied to claims 2-13, 19-30 and 35-37 above, and further in view of U.S. 5,852,083 to Walsh et al.

Schmit and Hefner et al. disclose all that is claimed as discussed in the above rejections of claims 2-13, 19-30 and 35-37. Furthermore, Hefner et al. discloses that the polymerization process involves a reaction solvent and that it must serve to dissolve and keep the catalyst in solution during the polymerization reaction and discloses a list of preferred solvents which include organic solvents including hydrocarbons such as toluene. Hefner et al. discloses that nonsolvents such as water can be contemplated (the paragraph at column 4, line 50 to column 5); that crystallinity must be controlled in the polymerization process (column 4, lines12-25); and that a continuous stirring tank is used for the preparation.

Walsh et al. discloses that a hot melt adhesive composition and discloses in the prior art (column 2, lines 3-22) that mixers use an emulsifier to help shear and to reduce the size of solid particles.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include an emulsifier as claimed (in this case a lipid or alcohol) in order to assure

that the composition in the mixer is emulsified, to reduce the solid particle sizes and to assure the batch is homogeneous so as to provide a product which has uniform properties throughout the batch.

With respect to the specific materials disclosed, i.e., at least one emulsifier selected from the group consisting of lipids, long chain alcohols, lecithins, glycol lipids, quaternized amines with lipid tails, and charged ionic detergents, and combinations thereof: This at least one emulsifier is only considered to be the use of "optimum" or "preferred" materials that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide to provide as disclosed by Hefner et al. and by Walsh et al. since they are well known types of emulsifiers and since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. In re Leshen, 125 USPQ 416.

With respect to the at least one emulsifier and the amount thereof by weight with respect to the switching medium, i.e., 0.001-10 %, 0.01-5 % and 0.1-1 %: Hefner et al. discloses that additives are added; that the switching medium has formulated versions that are employed for optimum performance (column 6, lines 17-20); that a multitude of bonding applications (column 6, lines 58-67) can be accommodated; and that other additives are included which affect internal characteristics of the switching medium (column 7, lines 1-7), e.g. aroma, shelf life, usage life, water resistance, etc. Walsh discloses that an emulsifier is added. Therefore, the limitations regarding the percentages by weight of the emulsifier is only considered to be the "optimum" values of the emulsifier amount of the thermal indicator having the hot melt adhesive, disclosed

by Schmit as modified by Hefner et al. and Walsh et al., as stated above, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on providing the proper dispersion of the components in the mixture to assure the batch has uniform properties throughout. See In re Boesch, 205 USPQ 215 (CCPA 1980).

Response to Arguments

9. Applicant's arguments filed August 3, 2005 with respect to claims 1 and 2 and Cannelongo have been considered but are moot in view of the amendment to claim 1.

10. Applicant's arguments filed August 3, 2005 with respect to claims 1-43 have been fully considered but they are not persuasive.

With respect to claims 1 and 18 and Schmit '880:

The arguments addressing that Schmit does not teach a medium to release an indicator, uses a covering to hold a spring loaded device within a barrel, and does not use a release as an indicator is not persuasive. Schmit teaches that a thermopolymeric switching medium 24 holds rod 22 within the body and upon heating to the appropriate temperature melts thereby releasing

the rod and allowing the spring 26 to force the top components of the indicator within the barrel through the frangible cover and out of the opening 18.

With respect to comprising fewer components than Schmit, this argument is not persuasive since the claims are comprising claims.

With respect to the intended uses, i.e., cooking and the degree of doneness: a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCPA 1963).

With respect to claims 2-17 and 19-43 and the applicant's discussion with respect to prima facie, field of the invention, nonanalogous art, not focusing on the invention as a whole, and no suggestion to combine the references:

a) The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

b) In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or

modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

c) In response to applicant's argument of nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

d) In this case, Schmit discloses that thermopolymeric switching mediums in the form of thermoplastic adhesives can be used and discloses that suitable hot melt adhesives such as commercially available glue gun types can be applied and that other thermoplastic adhesives will be apparent to those skilled in the art (column 2, lines 62-68). Schmit further discloses that the indicator can be used for any type of food and gives examples such as cake, pudding, bread, pies, and like and includes floating the indicator on soup (column 3, lines 26-28). Schmit was relied upon for the basic teaching of using thermopolymeric switching mediums and the other applied art, i.e., Smith, Hefner, Gaku, and Walsh in combination, were used to teach various compositions for the thermopolymeric switching medium, as suggested by Schmit, and taught by the other applied combinations, i.e., Smith, Hefner, Gaku and Walsh in combination.

With respect to claims 2-17 and 19-43 and the applicant's discussion with respect to the applied art spanning pages 15-16: These arguments address either:

1) Features of applicant's invention that are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993),

2) A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCPA 1963).

With respect to argument A and Schmit in view of Smith and Smith teaching an adhesive and not a releasing mechanism: It is Schmit who is relied upon for the basic teaching that adhesives can be used as releasing mechanism. Further, generally thermoplastic is thermopolymeric thereby meeting the limitations as claimed.

With respect to argument A and the intended use: See the discussion 2) above with respect to claims 2-17 and 19-43.

With respect to argument B and Schmit in view of Hefner and Hefner teaching an adhesive and not a releasing mechanism: It is Schmit who is relied upon for the basic teaching that adhesives can be used as releasing mechanism. Further, the argument with respect to substituting an

adhesive for a heat expandable material is not persuasive since Schmit was used for the teaching of an adhesive as a releasing mechanism and not for a heat expandable material.

With respect to argument B and the intended use: See the discussion 2) above with respect to claims 2-17 and 19-43.

With respect to argument C and Schmit and Hefner in view of Gaku and Gaku teaching a hot melt adhesive composition and not a releasing mechanism: It is Schmit who is relied upon for the basic teaching that adhesives can be used as releasing mechanism.

With respect to argument C and the intended use: See the discussion 2) above with respect to claims 2-17 and 19-43.

With respect to argument D and Schmit and Hefner in view of Walsh and Walsh teaching an adhesive and not a releasing mechanism: It is Schmit who is relied upon for the basic teaching that adhesives can be used as releasing mechanism.

With respect to argument D and the intended use: See the discussion 2) above with respect to claims 2-17 and 19-43.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Alexander Smith whose telephone number is 571-272-2251. The examiner can normally be reached on Monday through Friday from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. Alexander Smith
Primary Examiner
Technology Center 2800

RAS
October 12, 2005